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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,723	01/02/2002	Bjarne Roenfeldt Nielsen	5636.210-US	6089

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NOVOZYMES NORTH AMERICA, INC.  
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NEW YORK, NY 10110

EXAMINER
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RAO, MANJUNATH N

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/038,723

Applicant(s)

NIELSEN ET AL.

Examiner

Manjunath N. Rao, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 141-240 and 242-254 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☒ Claim(s) 141-167 is/are allowed.
- 6) ☒ Claim(s) 180,181,203,204,211,220,243 and 254 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 141-240, 242-254 are currently pending and are present for examination. Claims 254, 141-167, 180-181, 203-204, 211, 220, 243, are now under consideration. Claims 168-179, 182-202, 205-210, 212-219, 221-242, 244-253 remain withdrawn from consideration as being drawn to non-elected species.

Applicants' amendments and arguments filed on 12-22-04 have been fully considered and are deemed to be persuasive to overcome the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

### ***Duty to Disclose***

Applicant has again reinstated claim 254 drawn to an extremely large number of species. Examiner requests and reminds applicants that it is their duty to disclose all information that they are aware of with respect to the species claimed. Specifically, in addition to providing information that may have a bearing on the species claimed, Examiner urges applicant to provide appropriate directions to locate the species disclosed (in form of sequence information and amino acid positions) in such information as opposed to supplying them as part of a general IDS.

Examiner is aware that applicants have elected position 402 as the species for examination and said amino acid remains unchanged. The below rejection is made because Examiner was unable to find a variant glucoamylase with a mutation at position 402 (except for the Double patenting rejection below) during his search and in accordance with the species election requirement, he randomly selected the next species for examination, the amino acids in

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position 1-19, 21-25 and rejected the same in the previous Office action, which applicant has overcome. In view of that Examiner has now randomly selected the next species for examination for which the rejection follows.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 254, 180, 181 are rejected under 35 U.S.C. 102(a) as being anticipated by Allen et al. (Accession No. AAW55976, 7-27-1998). This rejection is based upon the public availability of a printed publication. Claims 254, 180, 181 of the instant application are drawn to a glucoamylase wherein said glucoamylase comprises a mutation (i.e., a substitution, deletion or addition of an amino acid) at specific positions 44, 51 in SEQ ID NO:2 or at a corresponding position in a homologous glucoamylase having at least 80% homology with SEQ ID NO:2. Allen et al. disclose a variant glucoamylase which has an amino acid sequence identity of more than 90% and wherein the polypeptide is mutated at amino acid 44, 51 of SEQ ID NO:2, thereby anticipating claims 254, 180, 181 as written.

Claims 254, 203-204 are rejected under 35 U.S.C. 102(b) as being anticipated by Labat et al. (Accession No. AAP81876, 3-15-1992). This rejection is based upon the public availability of

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a printed publication. Claims 254, 203-204 of the instant application are drawn to a glucoamylase wherein said glucoamylase comprises a mutation (i.e., a substitution, deletion or addition of an amino acid) at specific positions 96, 97 in SEQ ID NO:2 or at a corresponding position in a homologous glucoamylase having at least 80% homology with SEQ ID NO:2. Labat et al. disclose a variant glucoamylase which has an amino acid sequence identity of more than 90% and wherein the polypeptide is mutated at amino acid 96, 97 of SEQ ID NO:2, thereby anticipating claims 254, 203-204 as written.

Claims 254, 211, 220, 243 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibuya et al. (Accession No. JQ0607, 3-31-1992) or Hayashida et al. (Accession No. JT0479 6-7-1990). This rejection is based upon the public availability of a printed publication. Claims 254, 211, 220, 243 of the instant application are drawn to a glucoamylase wherein said glucoamylase comprises a mutation (i.e., a substitution, deletion or addition of an amino acid) at specific positions 104, 115, 243, 368 in SEQ ID NO:2 or at a corresponding position in a homologous glucoamylase having at least 80% homology with SEQ ID NO:2. Shibuya et al. or Hayashida et al. disclose a variant glucoamylase which has an amino acid sequence identity of more than 90% and wherein the polypeptide is mutated at amino acid 104, 115, 243, 368 of SEQ ID NO:2, thereby anticipating claims 254, 211, 220, 243 as written.

Claim 254 is rejected under 35 U.S.C. 102(b) as being anticipated by Nunberg et al. (Accession No. AAP40212, 1-9-1992). This rejection is based upon the public availability of a printed publication. Claims 254, of the instant application is drawn to a glucoamylase wherein

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said glucoamylase comprises a mutation (i.e., a substitution, deletion or addition of an amino acid) at specific positions 455, 457, 458 in SEQ ID NO:2 or at a corresponding position in a homologous glucoamylase having at least 80% homology with SEQ ID NO:2. Nunberg et al. disclose a variant glucoamylase which has an amino acid sequence identity of more than 90% and wherein the polypeptide is mutated at amino acid 455, 457, 458 of SEQ ID NO:2, thereby anticipating claims 254 as written.

#### *Allowable Subject Matter*

Claims 141-167 comprising the species which were searched are allowable.

#### *Conclusion*


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Manjunath N. Rao, Ph.D. whose telephone number is 571-272-0939. The Examiner can normally be reached on 7.00 a.m. to 3.30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.



Manjunath N. Rao, Ph.D.  
Primary Examiner  
Art Unit 1652

March 11, 2005

Continuation of Disposition of Claims: Claims withdrawn from consideration are 168-179,182-202,205-210,212-219,221-242 and 244-253.